

105) with a surface (4, 104) which coincides partly with the printing face (3, 103), comprising the steps of:

anisotropic etching of a surface (27) of a mold (20) into a patterned mold surface (29), such that a first recess (21) and a second recess (23) are created in the mold (20) with apertures in the original surface (27), which first recess (21) and a second recess (23) become narrower as its distance to the original surface (27) increases and has cross-sections parallel to the original surface (27) which, when projected perpendicularly on the original surface (27), lie within the aperture (41), and wherein the first and second recesses have different apertures, and

making a replica of the patterned mold surface (29) in a first body (105) with a patterned surface (104).

REMARKS

This application has been carefully reviewed in light of the Office Action dated September 6, 2002. Claims 1-3 and 5-7 remain pending in this application. Claims 1 and 6 are the independent claims. Favorable reconsideration is respectfully requested.

In response to the objection to the drawings as failing to comply with 37 CFR 1.83(a), Applicant respectfully believes the cancellation of Claims 8-10 render the objection moot. Applicant respectfully requests withdrawal of the 37 CFR 1.83(a) objection.

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On the merits, the Office Action rejected Claim 9 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and/or use the invention. Applicant respectfully believes that the cancellation of Claim 9 renders the § 112 rejection moot. Applicant requests the withdrawal of the § 112, first paragraph rejection.

Further on the merits, the Office Action rejected Claim 6 under 35 U.S.C. § 102(b) as being anticipated by Whitesides et al. (U.S. Patent No. 5,900,160; hereinafter "Whitesides"). The Office Action also rejected Claims 1-2, 8, and 10 under 35 U.S.C. § 102(b) as being anticipated by Hawker et al. (U.S. Patent No. 6,413,587; hereinafter "Hawker"). The Office Action also rejected Claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Hawker in view of Maracas et al. (U.S. Patent No. 5,937,758; hereinafter "Maracas"). The Office Action also rejected Claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Hawker. The Office Action also rejected Claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Whitesidesides in view of Whitesides et al. (Article Soft Lithography Agnew. Chem. Int. Ed. 1998, v. 37, pages 551-575; hereinafter "Whitesides-Article"). Applicant respectfully submits that the pending claims are patentable for at least the following reasons.

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Applicant's Claim 6 recites: "[a] A method of manufacturing a stamp (10) for use in a lithographic process, which stamp (10, 110) has a stamp body (5, 105) with a surface (4, 104) which coincides partly with the printing face (3, 103), comprising the steps of:

anisotropic etching of a surface (27) of a mold (20) into a patterned mold surface (29), such that a first recess (21) and a second recess (23) are created in the mold (20) with apertures in the original surface (27), which first recess (21) and a second recess (23) become narrower as its distance to the original surface (27) increases and has cross-sections parallel to the original surface (27) which, when projected perpendicularly on the original surface (27), lie within the aperture (41), and wherein the first and second recesses have different apertures, and

making a replica of the patterned mold surface (29) in a first body (105) with a patterned surface (104)."

Whitesides fails to recite or suggest first and second recesses have different apertures. Rather, Whitesides only depicts and recites recesses with common apertures. Consequently, Claim 6 is believed patentable over Whitesides for at least this reason.

Applicant's Claim 1 recites, in pertinent part: "a third recess (13) with an aperture (17) in the printing face (3) is present in the stamp body (5),

which recess (13) has cross-sections parallel to the printing face (3) and becomes substantially narrower as its distance to the printing face (30) increases, said cross-sections, when projected perpendicularly on the printing face (3), lying within the aperture (17),

the aperture (17) of the third recess (13) and the aperture (15) of the first recess (11) each have a dimension in a first direction in the printing face (3), and

said dimension of the aperture (17) of the third recess (13) is at least five times the dimension of said aperture (15) of the first recess (11)."

Hawker fails to recite or suggest a third recess with an aperture that is at least five times the dimension of aperture of the first recess. Rather, Hawker only shows recesses of the same aperture. One of ordinary skill in the art would fail to include recesses of multiple apertures because the size of the apertures is not merely convenient for printing face sizes of other dimensions for pattern features of other dimensions. Hawker fails to recite or suggest the third recess having such a large apertures for the prevention of bending of an isolated recess. Consequently, Claim 1 is believed patentable over Hawker or Hawker.

Claims 2-3, 5, and 7 depend from one or another of the independent claims discussed above and are believed patentable for at least the same reasons. In addition, Applicant respectfully

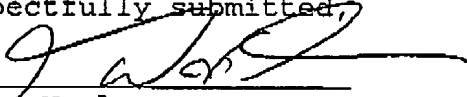
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believes Claims 2-3, 5, and 7 to be independently patentable and request separate consideration of each claim.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned agent may be reached by telephone at the number given below.

Respectfully submitted,

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APPENDIX A

MARKED-UP CLAIMS

1. (Amended) A stamp (10) for use in a lithographic process, which stamp (10) comprises a stamp body (5) with a printing face (3), said stamp body (5) having a first recess (11) with an aperture (15) in the printing face (3), ~~characterized in that~~wherein

the first recess (11) becomes narrower as its distance to the printing face (3) increases, and

cross-sections of the first recess (11) parallel to the printing face (3), when projected perpendicularly on the printing face (3), lie within the aperture (15), and a third recess (13) with an aperture (17) in the printing face (3) is present in the stamp body (5),

which recess (13) has cross-sections parallel to the printing face (3) and becomes substantially narrower as its distance to the printing face (30) increases, said cross-sections, when projected perpendicularly on the printing face (3), lying within the aperture (17),

the aperture (17) of the third recess (13) and the aperture (15) of the first recess (11) each have a dimension in a first direction in the printing face (3), and

said dimension of the aperture (17) of the third recess (13) is at least five times the dimension of said aperture (15) of the first recess (11).

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5. (Amended) A stamp (10) as claimed in claim 41, characterized in that said dimension of the aperture (17) of the third recess (13) is at least twenty times said dimension of the aperture (15) of the first recess (11).

6. (Amended) A method of manufacturing a stamp (10) for use in a lithographic process, which stamp (10, 110) has a stamp body (5, 105) with a surface (4, 104) which coincides partly with the printing face (3, 103), comprising the steps of:

anisotropic etching of a surface (27) of a mold (20) into a patterned mold surface (29), such that a first recess (21) and a second recess (23) are created in the mold (20) with ~~an aperture~~ apertures (41) in the original surface (27), which first recess (21) and a second recess (23) become narrower as its distance to the original surface (27) increases and has cross-sections parallel to the original surface (27) which, when projected perpendicularly on the original surface (27), lie within the aperture (41), and wherein the first and second recesses have different apertures, and

making a replica of the patterned mold surface (29) in a first body (105) with a patterned surface (104).